



## THE INFLUENCE OF INTERACTIVE MEDIA ANIMATI OF VIDEO SYMBIOSIS EXPLORATION MATERIAL ON STUDENTS' LEARNING OUTCOMES

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### ABSTRACT

This research is motivated by the low learning outcomes when learning science. This is evidenced by learning outcomes that do not reach the KKM score, as well as the use of monotonous media such as theme books, so that students have difficulty understanding the material and making learning less meaningful. The purpose of this study was to determine whether or not there was an effect of interactive media, animated videos, symbiosis exploration material on science learning outcomes in grade V SDN 34 Palembang. This research is a type of experimental research, namely the Quasi experimental type. The population and sample in this study were fifth grade students of SDN 34 Palembang, totaling 30 students in the control class and 30 students in the experimental class. Data collection techniques in this study were observation, tests and documentation. Data analysis techniques in this study include normality test, homogeneity test, hypothesis testing. The results of the study are hypothesis testing shows  $t_{count} > t_{table}$  or  $6.491 > 1.672$  so it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted. This means that there is an effect of interactive media, animated videos, symbiosis exploration material on the learning outcomes of fifth grade students of SDN 34 Palembang.

**Keywords:** *Learning outcomes, Animated video interactive media, Symbiosis*

### 1. INTRODUCTION

Education is essential to both a person's quality of life and the advancement of a country. Human life depends on education since it gives people the power to choose and alter their course in life (Mustadi, 2020, p. 1) Education is the process through which an individual grows in his or her abilities, attitudes, and behavior within the society in which they live. It is also the action or process of

imparting knowledge, growing in reasoning and judgment, and intellectually preparing oneself or others for adulthood. Finally, it is the action or process of gaining specific knowledge or skills for a career (Nugraha et al., 2020, p. 5). The interactions that take place in the classroom between teachers and students in order to accomplish learning objectives are known as the learning process. As the Magdalen (2020, p. 87), it is the duty of

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the educator to facilitate the full potential of their students during the learning process. Learning that facilitates students' comprehension of the subject matter is a good learning process. Learning media are necessary to effectively convey the learning content and make it easier for students to understand what they are learning.

Science is the study of natural phenomena as they are represented by facts, ideas, rules, and laws through a sequence of procedures that follow the scientific method. (Aris & Afina, 2022). Science is the study of natural phenomena using items that are found in the natural world. As a result, science education has to be complemented by powerful learning resources. Learning media is an intermediary medium that helps to make communication between teachers and students more effective by facilitating the teaching and learning process (Zahranisa, 2023, p. 777) Learning media is one part of the teaching system that is crucial to the success of the teaching and learning process, according to Nadya (2024, p. 22). A tool for facilitating the learning process and ensuring its success is learning media.

Interactive animated video media is one of the many learning media kinds that can help with the learning process. Animated videos, or interactive media, are a useful tool for the learning process because they combine sounds, images, and motions to assist students better absorb the content. Interactive media, or animated video, is a multimedia-based learning system, according to Agustin (2021, p. 73), since it may convey information that can be seen, heard, and interacted with simultaneously.

According to the data gathered, the issue in the VB class is the low learning

outcomes when it comes to science. This is demonstrated by the fact that learning outcomes fall short of the KKM score, which is 75; only 40% of students meet the KKM score, and the remaining 60% do not; additionally, the use of repetitive media, like theme books only, makes it harder for students to comprehend the subject matter and lessens the significance of learning. This is demonstrated during the learning process when pupils' inability to accurately answer questions stems from their lack of comprehension of the subject matter. Animated videos are meant to enhance learning through the use of interactive media, making the subject matter easier for pupils to understand. Based on the above described studies, it can be inferred that interactive animated video media has the potential to enhance learning outcomes and facilitate the learning process. It is anticipated that using this media will boost curiosity and excitement about studying, which will enhance learning results.

**2. METHODS**

The pretest and posttest assessments from the experimental and control groups were used to collect the study data that the investigator used. Prior to conducting the research, the investigator additionally produced pre-existing learning resources, including lesson plans, scoring guidelines, test question grids, and research instruments in the form of assessments. both the pretest and posttest.

The pretest and posttest data for the experimental class were obtained by taking the initial test (pretest), then students took the final test (posttest) after being given treatment using animated video interactive media in the experimental

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class. Based on the results of the pretest and posttest for the experimental class, the following data were obtained:

**Table 4.1 Pretest and Posttest Results for Experimental Class**

No	Student's name	Gender	Pretest Value	Posttest Value
1	AY	P	60	80
2	BF	L	60	90
3	CS	P	70	90
4	CPS	P	70	80
5	GT	P	40	70
6	IKA	P	50	80
7	JQA	p	50	90
8	MCS	L	40	80
9	MCR	L	60	80
10	M.F	L	60	90
11	MMA	L	40	70
12	MR	L	60	90
13	MAW	L	60	90
14	MAM	L	50	80
15	MH	L	60	70
16	MHA	L	50	80
17	MH	L	50	80
18	MJA	L	80	90
19	MTA	L	50	70
20	NI	P	70	80
21	NKW	P	50	100
22	OL	P	40	70
23	RTPE	L	60	90
24	ROR	L	50	70
25	RJR	P	60	90
26	RNA	P	80	80
27	RAW	L	50	90
28	RF	L	60	90
29	ZRD	P	70	80
30	ZLHB	P	80	90
	Amount		1730	2480
	Average		57.67	82.67
	Lowest value		40	70
	The highest score		80	100

Source (Researcher Data Processing 2024)

Based on the data above, it can be seen that the results of the test questions

in the pretest and posttest of the experimental class in the VA class consisting of 30 students experienced an increase after being given treatment using interactive video animation media. The lowest score in the experimental class on the pretest was 50 and the highest score was 80, while the lowest score in the experimental class on the posttest was 70 and the highest score was 100.

Control class pretest and posttest data were obtained using take the initial test (pretest), then students take the final test (posttest) after being given treatment using conventional learning, namely using theme books. Based on the results of the pretest and posttest for the experimental class, the following data were obtained:

**Table 2 Pretest and Posttest Results for Control Class**

No	Student's name	Gender	Pretest Value	Posttest Value
1	AIM	L	50	70
2	ANAW	L	50	70
3	AZAF	L	40	60
4	AL	P	50	60
5	ALF	L	40	70
6	AJP	P	30	70
7	A	P	40	60
8	CMD	P	60	80
9	DAR	L	50	70
10	DPA	P	40	60
11	DA	P	50	60
12	DAP	L	40	80
13	DFAZ	P	50	60
14	EJP	L	60	70
15	F.S	L	50	80
16	FT	P	40	70
17	MOBILE PHONE	L	60	80
18	KR	P	70	60
19	KAH	P	60	80
20	MAR	L	60	60
21	MIF	L	40	80
22	MPE	L	60	80
23	MPY	L	60	70
24	MRAR	L	40	60

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25	MRA	L	30	70
26	MRQ	L	60	60
27	RR	L	50	80
28	SENIOR HIGH SCHOOL	P	70	60
28	VPR	P	60	70
29	ZA	L	40	70
	Amount		1500	2070
	Average		50	57
	Lowest Value		30	60
	The highest score		70	80

Source: (Researcher Data Processing 2024)

Based on the data above, it can be seen that the results of the test questions in

the pretest and posttest of the control class in the VB class consist of 30 students where learning uses conventional methods, namely using theme books. The lowest score in the control class on the pretest was 30 and the highest score was 70, while the lowest score in the control class on the posttest was 60 and the highest score was 80

To test the normality of the data, it was carried out using Kolmogorov-Smirnov. The results of the data normality test have been processed using the SPSS 23 application. The following are the results

**Table 4.3 Data Normality Test Results  
Tests of Normality**

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic s	df	Sig.	Statistic s	Df	Sig.
New_pretest_Control	,100	30	,200*	,978	30	,756
New_Posttest_Control	,155	30	,065	,900	30	,008
New_Pretest_Experiment	,100	30	,200*	,968	30	,495
New_Posttest_Experiment	,133	30	,186	,972	30	,604

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the normality test above, it can be seen that the significant value of the pretest data in the experimental class is  $0.200 > 0.05$  and the posttest in the experimental class is  $0.186 > 0.05$ , the pretest in the control class is  $0.200 > 0.05$  and the posttest in the control class is  $0.065 > 0.05$ . Based on the Kolmogorov-

Smirnov test criteria, the data can be said to be normally distributed because the significance is more than 0.05.

In testing homogeneity in this study, the researcher used the Levene statistical test using SPSS 25, here are the homogeneity results in the table below

**Table 4.4 Homogeneity Test Results**

		Test of Homogeneity of Variances			
		Levene Statistics	df1	df2	Sig.
Results	Based on Mean	,145	1	58	,705
	Based on Median	,062	1	58	,804
	Based on Median and with adjusted df	,062	1	57,322	,805
	Based on trimmed mean	,120	1	58	,730

Based on the homogeneity test data table above, the significant value is 0.705. And the significance level used is . 0.05, then the significant value obtained is 0.705 > 0.05, so it can be concluded that the student learning outcome data is declared homogeneous.

Hypothesis testing in this research uses the t-test with the independent simple t-test. Hypothesis testing uses the t-test to

determine students' abilities in doing the posttest between the experimental and control classes. In this study, researchers used SPSS 25. The criteria for hypothesis testing using the independent simple test are Ho: if the significant value (2-tailed) is > 0.05 and Ho is rejected: if the significant value (2-tailed) is < 0.05. The following are the results of hypothesis testing using the t-test in the table below

**Table 4.5 T Test Results**

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
learning outcomes	Equal variances assumed	,145	,705	6,491	58	,000	13,667	2,105	9,452	17,881
	Equal variances not assumed			6,491	57,947	,000	13,667	2,105	9,452	17,881

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Based on the hypothesis testing table above, a significance value (2-tailed) of 0.000 is obtained because the significant value is  $0.000 < 0.05$  and the t value is obtained<sub>count</sub>

= 6.491 and t table = 1.672 with df = N-2 with N=60 (number of samples). So it can be concluded that  $t_{count} = 6.491 > t_{table} = 1.672$ . So based on hypothesis testing  $H_0$  is rejected and  $H_a$  is accepted. So it can be concluded that there is an influence of interactive media, animated videos, symbiotic exploration material on the learning outcomes of class V students at SDN 34 Palembang.

Based on study done by researchers who administered pretests and posttests to the control group and the experimental group. In comparison to classrooms that solely used theme books, it was discovered that student learning outcomes in those that used interactive media, animated videos, and students' excitement for learning were higher. Due to its ability to present engaging animated videos with vibrant, moving pictures, interactive media can encourage students to participate more actively in their education.

The animated videos' interactive elements can motivate pupils to concentrate more on the lesson content because they are highly engaged and intent on watching the entire thing. Student learning outcomes in the control class are poorer than in the experimental class because the control group's instruction solely consists of topic books, which bores the students and discourages them from being enthused about the material.

This is evident from the results of data analysis carried out by researchers with the posttest scores for the

experimental class and control class presented in the following table.

**Table 4.6 Posttest Analysis of Learning Results**

Statistics	Posttest Results	
	Experimental Class (VA)	Control Class (VB)
Male Subject	17	18
Female Subject	13	12
Highest Score	100	80
Lowest Score	70	60
Average Score	82.67	69

The experimental class, known as the VA class, has 30 pupils, as shown in the table above. With an average score of 82.67, the posttest results for the experimental class showed that one student received the highest score, 100, and six students had the lowest score, 70. The posttest results for the control class, class VB, which had 30 students overall, showed that 8 students had the maximum score of 80, while 12 students received the lowest score of 60, with an average score of 69.

This analysis shows that the experimental value for the class average score is higher than the control value. According to the findings of the t-test calculations (hypothesis) using the criteria set,  $H_a$  is rejected if  $t_{count} < t_{table}$  and  $H_0$  is rejected if  $t_{count} > t_{table}$ . Using SPSS, the researchers' research yielded a value of  $t = 6.491$ . However, the t distribution table showed  $t_{table} = 1.672 > 6.491$ , indicating that  $H_0$  was rejected and  $H_a$  was approved.

**3. CONCLUSION**

Based on the findings of a study done at SDN 34 Palembang with pretest and posttest data, it is possible to draw the conclusion that the use of animated video interactive media has an impact. The

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analysis shows that the experimental posttest average is 82.67, whereas the control class posttest average is 69. The experimental class's average value is higher than the control class's average value. Based on the collected research data, it is evident that students achieve very good learning outcomes when they use interactive video animation medium to work through the provided test questions in the experimental class. The data acquired indicates that the significant value is 0.000 when compared to 0.05, indicating that  $H_a$  is accepted and  $H_o$  is rejected in this instance. This is evident from the data results. So from the results of this analysis, to test the hypothesis of this research, there is a significant influence of animated video interactive media on student learning outcomes for class V symbiosis material at SDN 34 Palembang. This can be seen from the results of the t-test, which shows a significant value of  $0.000 < 0.005$  ( $p < 0.05$ ), so  $H_o$  is rejected. This means that  $H_a$  is accepted, thus there is a significant influence between students who receive learning using interactive video animation media and students who only use theme books in class V at SDN 34 Palembang.

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